

IN THE CLAIMS

Claim 1. (currently amended). A method for producing an electrode ~~In the electrode production method for producing an electrode~~ including a rectangular electrode carrier and a gel electrolyte film formed on the electrode carrier and having a width greater than the electrode carrier, the method comprising the steps of:

~~an overlaying step for overlaying a first carrier having a greater width than the gel electrolyte film, a second carrier having a width approximately identical to that of the gel electrolyte film, and the electrode carrier in this order,~~

~~a coating step for applying an electrolyte composition onto the first carrier, the second carrier, and the electrode carrier which have been put overlaid upon one another ~~in the overlaying step~~, in such a manner that the applied electrolyte composition has a width greater than the width of the second carrier and smaller than the width of the first carrier,~~

~~a first peel off step for peeling off, from the first carrier, the second carrier and the electrode carrier coated with the gel applied electrolyte composition ~~in the coating step and overlaid on each other~~,~~

~~a gelling step for forming into a the gel electrolyte film the electrolyte composition applied onto the second carrier and the electrode carrier which have been peeled off from the first carrier ~~in the first peel off step~~, and~~

~~a second peel off step for peeling off from the second carrier the electrode carrier and the gel electrolyte film formed of the electrolyte composition gelled in the gelling step.~~

Claim 2. (currently amended) The ~~electrode production~~ method of Claim 1, wherein the electrolyte composition ~~in the coating step~~ is applied in a sol state.

Claim 3. (currently amended) The ~~electrode production~~ method of Claim 2, wherein the electrolyte composition contains an electrolyte salt, matrix polymer, and a swelling solvent.

Claim 4. (currently amended) The ~~electrode production~~ method of Claim 3, wherein the electrolyte salt is further defined as being selected from the group consisting of LiPF₆, LiAsF₆, LiClO₄, LiCF₃SO₃, Li(CF₃SO₂)₂N, and LiC₄F₉SO₃.

Claim 5. (currently amended) The ~~electrode production~~ method of Claim 3, wherein the matrix polymer is further defined as being selected from the group consisting of polyacrylonitrile, polyvinylidene fluoride, polytetrafluoroethylene, polyhexafluoropropylene, polyethylene oxide, polypropylene oxide, polyphosphazene, polysiloxane, polyvinyl acetate, polyvinyl alcohol, polymethyl methacrylate, polyacrylic acid, polymethacrylic acid, styrene-butadiene rubber, nitrile-butadiene rubber, polystyrene, and polycarbonate.

Claim 6. (currently amended) The ~~electrode production~~ method of Claim 3, wherein the swelling solvent is further defined as being selected from the group consisting of ethylene carbonate, propylene carbonate, butylene carbonate, γ -butyrolactone, γ -valerolactone, diethoxyethane, tetrahydrofuran, 2-methyl tetrahydrofuran, 1, 3-dioxane, methyl acetate, methyl propionate, dimethyl carbonate, diethyl carbonate, and ethylmethyl carbonate.

Claim 7. (currently amended) The ~~electrode production~~ method of Claim 1, wherein in the first peel-off step of peeling off the second carrier and the electrode carrier coated with the applied electrolyte composition from the first carrier, the first carrier has the an adhesion with the electrolyte composition higher than the an adhesion between the second carrier and the electrolyte composition.

Claim 8. (currently amended) The ~~electrode production~~ method of Claim 1, wherein in the second peel-off step of peeling off the electrode carrier and the gel electrolyte film formed of the electrolyte composition from the second carrier, the second carrier has the an adhesion with the gel electrolyte film lower than the an adhesion between the electrode carrier and the gel electrolyte film.

Claim 9. (currently amended) The ~~electrode production~~ method of Claim 8, wherein the second carrier consists of a synthetic resin.

Claim 10. (currently amended) The ~~electrode production~~ method of Claim 9, wherein the synthetic resin consists of propylene.

Claim 11. (currently amended) A method for producing a gel electrolyte cell, the method comprising the steps of:

forming in the gel electrolyte cell production method using an electrode including a rectangular electrode carrier and a gel electrolyte film formed on the electrode carrier and having a width greater than the electrode carrier, the electrode being produced by:

an overlaying step for overlaying a first carrier having a greater width than the gel electrolyte film, a second carrier having a width approximately identical to that of the gel electrolyte film, and the electrode carrier in this order,

a coating step for applying an electrolyte composition onto the first carrier, the second carrier, and the electrode carrier which have been put overlaid upon one another in the overlaying step, in such a manner that the applied electrolyte composition has a width greater than the width of the second carrier and smaller than the width of the first carrier,

a first peel off step for peeling off, from the first carrier, the second carrier and the electrode carrier coated with the gel applied electrolyte composition in the coating step and overlaid on each other,

a gelling step for forming into a the gel electrolyte film the electrolyte composition applied onto the second carrier and the electrode carrier which have been peeled off from the first carrier in the first peel off step, and

a second peel off step for peeling off from the second carrier the electrode carrier and the gel electrolyte film formed of the electrolyte composition gelled in the gelling step; and

producing the gel electrolyte cell including the formed electrode,

wherein the electrolyte composition in the coating step is applied in a sol state,

wherein the electrolyte composition contains an electrolyte salt, a matrix polymer, and a swelling solvent, and

wherein the matrix polymer is further defined as being selected from the group consisting of polyhexafluoropropylene, polypropylene oxide, polyphosphazene, polysiloxane, polyacrylic acid, polymethacrylic acid, styrene-butadiene rubber, nitrile-butadiene rubber, and polycarbonate.

Claims 12-13. (canceled).

Claim 14. (currently amended) The method for producing a gel electrolyte cell gel electrolyte cell production method of Claim 11, wherein the electrolyte salt is further defined as being selected from the group consisting of LiPF₆, LiAsF₆, LiClO₄, LiCF₃SO₃,

Li(CF3SO2)2N, and LiC4F9SO3.

Claim 15. (canceled)

Claim 16. (currently amended) The method for producing a gel electrolyte cell ~~gel electrolyte cell production method~~ of Claim 11, wherein the swelling solvent is further defined as being selected from the group consisting of ethylene carbonate, propylene carbonate, butylene carbonate, γ -butyrolactone, γ -valerolactone, diethoxyethane, tetrahydrofuran, 2-methyl tetrahydrofuran, 1, 3-dioxane, methyl acetate, methyl propionate, dimethyl carbonate, diethyl carbonate, and ethylmethyl carbonate.

Claim 17. (currently amended) The method for producing a gel electrolyte cell ~~gel electrolyte cell production method~~ of Claim 11, wherein in the first peel-off step of peeling off the second carrier and the electrode carrier coated with the applied electrolyte composition from the first carrier, the first carrier has an ~~the~~ adhesion with the electrolyte composition higher than an ~~the~~ adhesion between the second carrier and the electrolyte composition.

Claim 18. (currently amended) The method for producing a gel electrolyte cell ~~gel electrolyte cell production method~~ of Claim 11, wherein in the second peel-off step of peeling off the electrode carrier and the gel electrolyte film formed of the electrolyte composition from the second carrier, the second carrier has an ~~the~~ adhesion with the gel electrolyte film lower than an ~~the~~ adhesion between the electrode carrier and the gel electrolyte film.

Claim 19. (currently amended) The method for producing a gel electrolyte cell ~~gel electrolyte cell production method~~ of Claim 18, wherein the second carrier consists of a synthetic resin.

Claim 20. (currently amended) The method for producing a gel electrolyte cell ~~gel electrolyte cell production method~~ of Claim 19, wherein the synthetic resin consists of propylene.

Claims 21-24. (canceled).

Claim 25. (new) A method for producing a gel electrolyte cell, the method comprising the steps of:

forming an electrode including a rectangular electrode carrier and a gel electrolyte film formed on the electrode carrier and having a width greater than the electrode carrier by:

overlays a first carrier having a greater width than the gel electrolyte film, a second carrier having a width approximately identical to that of the gel electrolyte film, and the electrode carrier in this order,

applying an electrolyte composition onto the first carrier, the second carrier, and the electrode carrier which have been overlaid upon one another, in such a manner that the applied electrolyte composition has a width greater than the width of the second carrier and smaller than the width of the first carrier,

peeling off, from the first carrier, the second carrier and the electrode carrier coated with the applied electrolyte composition,

forming into the gel electrolyte film the electrolyte composition applied onto the second carrier and the electrode carrier which have been peeled off from the first carrier, and

peeling off from the second carrier the electrode carrier and the gel electrolyte film formed of the electrolyte composition; and

producing the gel electrolyte cell including the formed electrode.